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(12) **United States Patent**  
**Rembe**

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(54) **DEVICE AND METHOD FOR THE  
INTERFEROMETRIC MEASURING OF AN  
OBJECT**

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(71) Applicant: **Polytec GmbH**, Waldbronn (DE)

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(21) Appl. No.: **14/604,849**

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CPC ..... **G01B 11/14** (2013.01); **G01B 9/02005**  
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(57) **ABSTRACT**

A device for the interferometric measuring of an object, including a radiation source for generating an output beam, at least one beam splitter, as well as at least one detector, with the beam splitter being arranged in the radiation path of the output beam such that the output beam is split into at least one measuring beam and one reference beam, and the device is embodied to interfere the reference beam on the detector with an interference beam to form an optic interference. The device has an open optic resonator, which is arranged in the radiation path of the device such that the measuring beam enters the open optic resonator and the interference beam emitted from the open optic resonator is interfered with a reference beam on the detector to form an optic interference. The invention further relates to a method for the interferometric measuring of an object.

**20 Claims, 2 Drawing Sheets**

